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			EXAMINER
27195	7590	11/20/2003	ROCHE, TRENTON J

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/729,448	PORKKA, JOSEPH A.
	Examiner	Art Unit
	Trent J Roche	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 October 2003</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-35</u> is/are pending in the application.

    4a) Of the above claim(s) <u>5, 6 and 26-35</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-4 and 7-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>04 December 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .	6) ☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is responsive to communications received 29 October 2003, in which the

Applicant has elected Group 1, claims 1-4 and 7-25 with traverse for further prosecution on the

merits.

2.   Claims 1-4 and 7-25 have been examined.

Election/Restrictions

1.   Restriction to one of the following inventions is required under 35 U.S.C. 121:

  I.   Claims 1-4 and 7-25, drawn to a system and method for building a software system,

         classified in class 717, subclass 103.

  II.   Claims 26-28 and 30-35, drawn to a building machine and a data structure for use in

         software development, classified in class 717, subclass 107.

  III.   Claim 29, drawn to a build manager for generating information for generating

         information for use by a build machine, and for transmitting information to and

         from a build machine, classified in class 717, subclass 100.

  IV.   Claims 5 and 6, drawn to a data packet for transmitting information, classified in

         class 709, subclass 213.

The inventions are distinct, each from the other because of the following reasons:

2.   Inventions I and II are related as combination and subcombination. Inventions in this

relationship are distinct if it can be shown that (1) the combination as claimed does not require the

particulars of the subcombination as claimed for patentability, and (2) that the subcombination has

utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as

claimed does not require the particulars of the subcombination as claimed because the claims merely

discuss the act of organizing and distributing files to the one or more build machines, and do not

discuss subsequential actions by the build machines which contribute to the overall workings of

invention I. The subcombination has separate utility such as being a computer system used for the

compilation of software distributed over a network, which would not include the various steps

outlined in invention I.

3.   Inventions II and III are related as subcombinations disclosed as usable together in a single

combination. The subcombinations are distinct from each other if they are shown to be separately

usable. In the instant case, invention III has separate utility such as a database system for handling

queries relating to components available on a network, and does not perform the steps of building

software based on distributed files. See MPEP § 806.05(d).

4.   Inventions I and IV are unrelated. Inventions are unrelated if it can be shown that they are

not disclosed as capable of use together and they have different modes of operation, different

functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different

inventions relate to a system for building a software system in invention I, and a data packet adapted

to transmit information between computer systems in invention IV. Invention IV is dictating the

workings of a data packet and its intended use, whereas invention I discusses the distribution of

files, and does not indicate the method of transmission.

5.   Applicant's election of Group I in Paper No. 4 is acknowledged. Because applicant did not

distinctly and specifically point out the supposed errors in the restriction requirement, the election

has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

3.   Claim 19 objected to because of the following informalities: on line 5, the word

'buildmachines' should have a space between the two words. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claims 20 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

The claims proceed to include a reference to more than one statutory class of invention. Note

MPEP 2173.05(p) which states:

> A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph.
> Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. at 1551.

On this basis, claims 20 and 24 are rejected. It is recommended that claims 20 and 24 be re-written

to be in independent form, which comprises the inventive concepts that the claim was intended to

originally comprise (i.e. claims 19 and 21, respectively).

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any
> new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of
> this title.

Claims 20 and 24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-

statutory subject matter. Note MPEP 2173.05(p) which states:

> A single claim which claims both an apparatus and the method steps of using the
> apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17
> USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic
> transmission workstand and the method steps of using it was held to be ambiguous and
> properly rejected under 35 U.S.C. 112, second paragraph.
> Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the
> claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps
> two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so
> as to set forth the statutory classes of invention in the alternative only. Id. at 1551.

On this basis, claims 20 and 24 are rejected. It is recommended that claims 20 and 24 be re-written

to be in independent form, which comprises the inventive concepts that the claim was intended to

originally comprise (i.e. claims 19 and 21, respectively).

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.   Claims 1-4, 7-13 and 15-25 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent 6,457,170 to Boehm et al.

Regarding claim 1:

Boehm et al teach:

-   a system for building a software system ("a method and apparatus for building a software

    system..." in col. 2 lines 35-36)

-   a first component for building a list of file names ("the present invention generates a cache

    link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-

    48. Further, the development environment comprises "networked software development

    computer workstations wherein multiple workstations have access to one or more network

    caches." in col. 2 lines 37-39)

-   a second component for distributing to one or more of the build machines one or more

    published files ("pre-loading one or more network cache memories with as much useful

    information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the

    source file handler checks out a copy of the source file from the software library

    archive...renames the file...and copies the renamed file into the proper network cache..." in

    col. 9 lines 24-28)

    as claimed.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, Boehm et al teach wherein the first

component, second component and the one or more build machines execute on a single computer

as claimed ("the present invention can be practiced with a single network cache the holes source and

object files..." in col. 9 lines 10-12)

Regarding claim 3:

The rejection of claim 1 is incorporated, and further, Boehm et al teach wherein the first

component, second component and the one or more build machines execute on a plurality of

computers as claimed ("In a preferred embodiment, there will be a plurality of network caches...one

for each different host architecture..." in col. 9 lines 6-9)

Regarding claim 4:

The rejection of claim 1 is incorporated, and further, Boehm et al teach wherein each the first

component, second component and the one or more build machines execute on separate computers

as claimed ("In a preferred embodiment, there will be a plurality of network caches...one for each

different host architecture..." in col. 9 lines 6-9)

Regarding claim 7:

The rejection of claim 1 is incorporated, and further, Boehm et al teach storing on a computer

readable medium ("a storage medium that includes a certain amount of quickly accessible electronic

storage..." in col. 5 lines 26-28)

Regarding claim 8:

The rejection of claim 1 is incorporated, and further, Boehm et al teach a list of published file names as claimed ("object file links are links from explicit object file names and potentially usable object files names to corresponding copies of the object file stored in cache." in col. 4 lines 16-19)

Regarding claim 9:

The rejection of claim 1 is incorporated, and further, Boehm et al teach initiating file transfers as claimed (Note Fig. 6 item 216 and the corresponding section of the disclosure. To copy to a network cache, a file transfer must inherently be initiated.)

Regarding claim 10

The rejection of claim 1 is incorporated, and further, Boehm et al teach initiating file transfers as claimed (Note Fig. 7A and 7B. To build the program, the builder must inherently initiate file transfers to the network caches for the purpose of receiving the information contained in the source files.)

Regarding claim 11:

The rejection of claim 1 is incorporated, and further, Boehm et al teach initiating file transfers as claimed ("Alternatively, software developers may want the option of manually updating the object file caches, by loading only selected object files..." in col. 15 lines 20-22. The file transfers are initiated by the user, which is a process other than those stated in the claim.)

Regarding claim 12:

The rejection of claim 1 is incorporated, and further, Boehm et al teach building a list of updates as claimed ("practitioners of the present invention may want to set up an automatic process for updating the object caches that initiates whenever a new build list is checked into RCS." in col. 16 lines 34-37)

Regarding claim 13:

The rejection of claim 1 is incorporated, and further, Boehm et al teach a data structure for storing the list of published file names (Note Fig. 8A, items 100 and 712. Data structures must inherently be used to store the information in these lists.)

Regarding claim 15:

Boehm et al teach:

- a system for building a software system ("a method and apparatus for building a software system..." in col. 2 lines 35-36)

- employing a plurality of build machines ("In a preferred embodiment, there will be a plurality of network caches...one for each different host architecture..." in col. 9 lines 6-9)

- a component for broadcasting to one or more of the build machines one or more published build files ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

- a component for selectively receiving and storing persistently one or more of the broadcast

    published build files ("the source file handler checks out a copy of the source file from the

    software library archive...renames the file...and copies the renamed file into the proper

    network cache..." in col. 9 lines 24-28. For the file to be stored in the network cache, a

    component must have received and stored the file.)

as claimed.

Regarding claim 16:

The rejection of claim 15 is incorporated, and further, Boehm et al teach a component for

broadcasting as claimed (Note rejection regarding claim 2. The processes of the invention are shown

to operate on one computer.)

Regarding claim 17:

The rejection of claim 15 is incorporated, and further, Boehm et al teach a component for

broadcasting as claimed (Note rejection regarding claim 3. The processes of the invention are shown

to operate on a plurality of computers.)

Regarding claim 18:

The rejection of claim 15 is incorporated, and further, Boehm et al teach a component for

broadcasting as claimed (Note rejection regarding claim 4. The processes of the invention are shown

to operate on separate computers.)

Regarding claim 19:

Boehm et al teach:

- a method for building a software system ("a method and apparatus for building a software system…" in col. 2 lines 35-36)

- collecting from one or more build machines, one or more files names corresponding to the one or more build files ("the present invention generates a cache link structure. The cache link structure is a system of source file links…" in col. 2 lines 46-48.)

- determining which of the one or more build files the one or more build machines are to send to a post build machine (Note Fig. 4, item 400 and the corresponding section of the disclosure. Cache updating is performed via a post-build 'machine,' which is controlled by the central network controller.)

- persistently storing the one or more build files on the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive…renames the file…and copies the renamed file into the proper network cache…" in col. 9 lines 24-28)

- sending to the one or more build machines a list of file names of build files to be sent to the post build machine, and sending the one or more build files to the post build machine ("practitioners of the present invention may want to set up an automatic process for updating the object caches that initiates whenever a new build list is checked into RCS." in col. 16 lines 34-37. If the build object is found to need updating, it would be sent to the post build machine for updating.)

- determining which of the one or more build files the one or more build machines are to receive from the post build machine (Note Fig. 4, item 400 and the corresponding section of

the disclosure. The system would inherently determine which of the updated build files the

network caches should be updated with.)

- sending to the one or more build machines a list of file names of build files to be received

    from the post build machine ("the present invention generates a cache link structure. The

    cache link structure is a system of source file links..." in col. 2 lines 46-48.)

- distributing one or more build files to the one or more build machines ("pre-loading one or

    more network cache memories with as much useful information as can be ascertained from

    the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the

    source file from the software library archive...renames the file...and copies the renamed file

    into the proper network cache..." in col. 9 lines 24-28)

- persistently storing the one or more build files distributed to the one or more build machines

    ("the source file handler checks out a copy of the source file from the software library

    archive...renames the file...and copies the renamed file into the proper network cache..." in

    col. 9 lines 24-28. For the file to be stored in the network cache, a component must have

    stored the file.)

Regarding claim 20:

Boehm et al teach a computer-readable medium having computer-executable instructions. Note

rejection regarding claim 7. Further, this claim is directed to computer-executable instructions for

performing the method of claim 19, and is therefore rejected for the reasons set forth in connection

with claim 19.

Regarding claim 21:

Boehm et al teach:

- a method for building a software system ("a method and apparatus for building a software system..." in col. 2 lines 35-36)

- collecting one or more build files from one or more build machines (Note Fig. 7A and 7B. To build the program, the builder must inherently collect files from the network caches for the purpose of receiving the information contained in the source files.)

- distributing the one or more build files to the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Regarding claim 22:

The rejection of claim 21 is incorporated, and further, Boehm et al teach broadcasting the one or more build files to the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Regarding claim 23:

The rejection of claim 22 is incorporated, and further, Boehm et al teach determining and storing the files as claimed ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Regarding claim 24:

Boehm et al teach a computer-readable medium having computer-executable instructions. Note

rejection regarding claim 7. Further, this claim is directed to computer-executable instructions for

performing the method of claim 21, and is therefore rejected for the reasons set forth in connection

with claim 21.

Regarding claim 25:

Boehm et al teach:

- a system for building a software system ("a method and apparatus for building a software

  system..." in col. 2 lines 35-36)

- means for collecting from one or more build machines, one or more files names

  corresponding to the one or more build files ("the present invention generates a cache link

  structure. The cache link structure is a system of source file links..." in col. 2 lines 46-48.)

- means for determining which of the one or more build files the one or more build machines

  are to send to a post build machine (Note Fig. 4, item 400 and the corresponding section of

  the disclosure. Cache updating is performed via a post-build 'machine,' which is controlled

  by the central network controller.)

- means for sending the one or more build files to the post build machine ("practitioners of

  the present invention may want to set up an automatic process for updating the object

  caches that initiates whenever a new build list is checked into RCS." in col. 16 lines 34-37. If

  the build object is found to need updating, it would be sent to the post build machine for

  updating.)

- means for determining which of the one or more build files the one or more build machines are to receive from the post build machine (Note Fig. 4, item 400 and the corresponding section of the disclosure. The system would inherently determine which of the updated build files the network caches should be updated with.)

- means for sending to the one or more build machines a list of file names of build files to be sent to the one or more build machines and the build files to be received from the one or more build machine ("the present invention generates a cache link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-48. Further, Note Fig. 8A, items 100 and 712 which indicate which files to be received from the build machines for the purpose of building the complete program.)

- means for distributing one or more build files to the one or more build machines ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,457,170

to Boehm et al in view of U.S. Patent 5,339,435 to Lubkin et al.

Regarding claim 14:

The rejection of claim 13 is incorporated, and further, Boehm et al do not teach a data structure

utilizing a hash as claimed. Lubkin et al teach in an analogous system for building software the

storing of file names in a hashed data structure (Note col. 19, lines 3-21. "The pathname of each

BCT is then formed by the combination of element host type...and relevant element

characteristics...hashed together."). It would have been obvious to someone of ordinary skill in the

art at the time the invention was made to use the hashing data structure as disclosed by Lubkin et al

with the system for building software of Boehm et al, as this would allow the system to quickly

search the data structure containing file names by resolving hash values in the system disclosed by

Boehm et al.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

12.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Trent J Roche whose telephone number is (703)305-4627. The examiner can

normally be reached on Monday-Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where

this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703)305-3900.

Trent J Roche
Examiner
Art Unit 2124

TJR

**ANTONY NGUYEN-BA
PRIMARY EXAMINER**